Progesterone Receptor(PR) (Phospho Ser294) Rabbit pAb

CatalogNo: YP0531 Orthogonal Validated

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB,IHC,IF,ELISA

MW
- 98kD (Observed)

Isotype
- IgG

Storage

Storage*	-15°C to -25°C/1 year (Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-2000
IHC 1:50-300
IF 1:200-1:1000
ELISA 5000-1:20000

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human Progesterone Receptor around the phosphorylation site of Ser294. AA range:261-310

Specificity	Phospho-PR (S294) Polyclonal Antibody detects endogenous levels of PR protein only when phosphorylated at S294.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):GRsPL

Target Information

Gene name	PGR;NR3C3
Protein Name	Progesterone Receptor (PR)

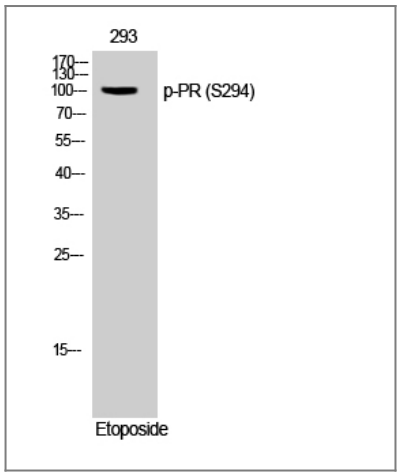
Organism	Gene ID	UniProt ID
Human	5241;	P06401;
Mouse		Q00175;
Rat	25154;	Q63449;

Cellular Localization	Nucleus. Cytoplasm. Nucleoplasmic shuttling is both hormone- and cell cycle-dependent. On hormone stimulation , retained in the cytoplasm in the G (1) and G (2) /M phases.; [Isoform A]: Nucleus. Cytoplasm. Mainly nuclear.; [Isoform 4]: Mitochondrion outer membrane .
Tissue specificity	In reproductive tissues the expression of isoform A and isoform B varies as a consequence of developmental and hormonal status. Isoform A and isoform B are expressed in comparable levels in uterine glandular epithelium during the proliferative phase of the menstrual cycle. Expression of isoform B but not of isoform A persists in the glands during mid-secretory phase. In the stroma , isoform A is the predominant form throughout the cycle. Heterogeneous isoform expression between the glands of the endometrium basalis and functionalis is implying region-specific responses to hormonal stimuli.

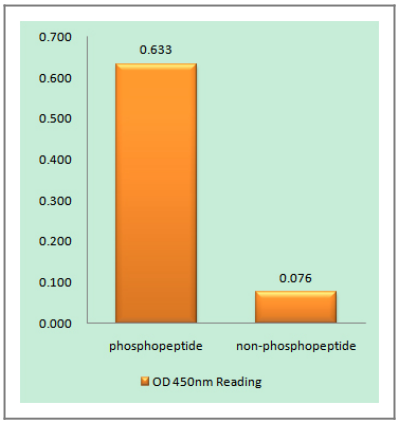
Function

Domain:Composed of three domains: a modulating N-terminal domain , a DNA-binding domain and a C-terminal steroid-binding domain. ,Function:Isoform A is inactive in stimulating c-Src/MAPK signaling on hormone stimulation. ,Function:The steroid hormones and their receptors are involved in the regulation of eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues. Progesterone receptor isoform B (PRB) is involved activation of c-SRC/MAPK signaling on hormone stimulation. ,online information:Progesterone receptor entry ,PTM:Phosphorylated on multiple serine sites. Several of these sites are hormone-dependent. Phosphorylation on Ser-294 occurs preferentially on isoform B , is highly hormone-dependent and modulates ubiquitination and sumoylation on Lys-388. Phosphorylation on Ser-102 and Ser-345 also requires induction by hormone. Basal phosphorylation on Ser-81 , Ser-162 , Ser-190 and Ser-400 is increased in response to progesterone and can be phosphorylated in vitro by the CDK2-A1 complex. Increased levels of phosphorylation on Ser-400 also in the presence of EGF , heregulin , IGF , PMA and FBS. Phosphorylation at this site by CDK2 is ligand-independent , and increases nuclear translocation and transcriptional activity. Phosphorylation at Ser-162 and Ser-294 , but not at Ser-190 , is impaired during the G (2) /M phase of the cell cycle. Phosphorylation on Ser-345 by ERK1/2 MAPK is required for interaction with SP1. ,PTM:Sumoylation is hormone-dependent and represses transcriptional activity. Sumoylation on all three sites is enhanced by PIAS3. Desumoylated by SENP1. Sumoylation on Lys-388 , the main site of sumoylation , is repressed by ubiquitination on the same site , and modulated by phosphorylation at Ser-294. ,PTM:Ubiquitination is hormone-dependent and represses sumoylation on the same site. Promoted by MAPK-mediated phosphorylation on Ser-294. ,similarity:Belongs to the nuclear hormone receptor family. ,similarity:Belongs to the nuclear hormone receptor family. NR3 subfamily. ,similarity:Contains 1 nuclear receptor DNA-binding domain. ,subcellular location:Mainly nuclear. ,subcellular location:Nucleoplasmic shuttling is both homone- and cell cycle-dependent. On hormone stimulation , retained in the cytoplasm in the G (1) and G (2) /M phases. ,subunit:Interacts with SMARD1 and UNC45A. Interacts with CUEDC2; the interaction promotes ubiquitination , decreases sumoylation , and repesses transcriptional activity. Interacts with PIAS3; the interaction promotes sumoylation of PR in a hormone-dependent manner , inhibits DNA-binding , and alters nuclear export. Interacts with SP1; the interaction requires ligand-induced phosphorylation on Ser-345 by ERK1/2 MAPK. ,

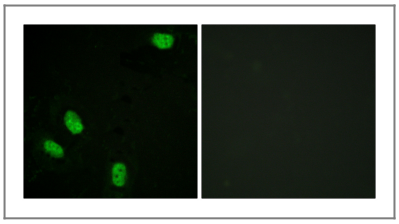
Validation Data



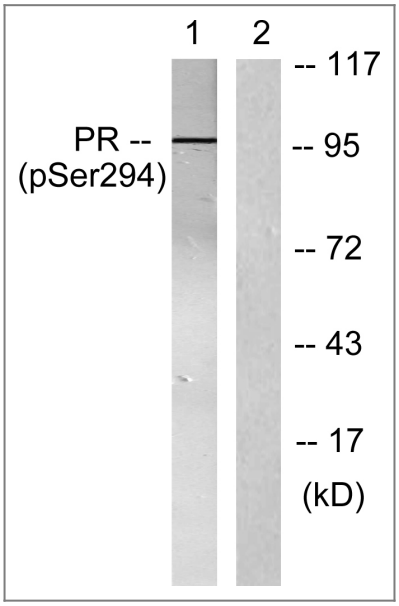
Western Blot analysis of 293 cells using Phospho-PR (S294) Polyclonal Antibody



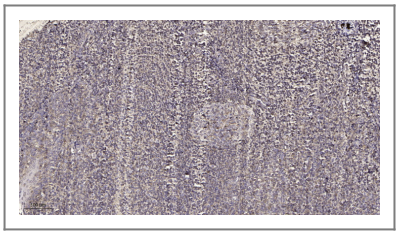
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Progesterone Receptor (Phospho-Ser294) Antibody



Immunofluorescence analysis of HeLa cells, using Progesterone Receptor (Phospho-Ser294) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from 293 cells treated with Etoposide 25uM 60', using Progesterone Receptor (Phospho-Ser294) Antibody. The lane on the right is blocked with the phospho peptide.



Immunohistochemical analysis of paraffin-embedded human tonsil. 1, Antibody was diluted at 1:200 (4℃ overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200 (room temperature, 45min).

Contact information

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